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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,983	05/10/2001	Teruzo Toui	0261-0008	4118

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EXAMINER

ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

13

DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,983

Applicant(s)

TOUI ET AL.

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

Response to Amendment

Applicant has amended claim 1 such that the first of the two possible compositions recited therein, i.e. the composition containing materials (I), (II), and (III), has been removed from consideration. The composition containing (I) and (IV), wherein (IV) is the reaction product of (II) and (III), is still described by claim 1.

In view of this amendment, the rejections over *Ohnishi et al.* and *Mizutani et al.* are hereby withdrawn as neither of these references suggests reacting (II) and (III) together before combining their reaction product with (I). Potential rejections over the international patent documents to *Karuga et al.*, and *Tamai et al.*, which were cited as being potentially relevant, are also obviated by Applicant's modification of claim 1. However, the Examiner failed to consider before the likelihood that the required presence of (I) and (IV) could be satisfied by a single material. That is, there seemed to be some probability that a reference might disclose a silicate-grafted resin possessing film-forming ability. A modified search of the prior art confirmed the Examiner's suspicion.

As an aside, receipt of Applicant's declaration showing that the incorporation of a reaction product derived from components (II) and (III) provides better properties than does a simple mixture of these materials is acknowledged. However, a showing of unexpected results is inadequate to overcome the rejection discussed *vida infra* because said rejection is administered under section 102 of the U.S. code.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by the abstract for JP 60-199074 A. The abstract associated with this reference discloses a composition featuring a composite resin that is synthesized by reacting a alkoxysilyl group-functionalized organic polymer with silica particles. (Silica particles are condensation products of a silicate compound and, hence, fall under the definition of component (II) according to the newly inserted paragraph at page 6 of Applicant's Specification). The abstract further states that the aforementioned composition is capable of forming films having good corrosion and wear resistance. Therefore, all of the limitations of amended claim 1 are satisfied. On page 6 of the reference, acrylic polymers are mentioned as exemplary of the organic resins that are silylated. However, there is no indication as to what monomers are employed in the preparation of said acrylic polymers thus the limitations of claim 3 are not met.

Allowable Subject Matter

Claims 2-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Neither oxyalkylene-modified silicates nor a

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film-forming resin other than the aforementioned composite resin are mentioned by the reference.

The updated search performed by the Examiner also unearthed Takeuchi et al., JP 2000-144049 which discloses a coating composition quite similar to that presently claimed. In fact, the composition described therein mirrors the instant invention in most all respects except that the silicate-grafted resins are not structurally equivalent due to the different approaches taken toward synthesizing this component. Takeuchi prepares the graft copolymer by reacting the hydroxyl groups of the organic resin with the alkoxy groups of the tetraalkoxysilane condensate. In this manner, a product is obtained wherein the pendant silicon-based substituent is linked to the polymer chain via an easily hydrolyzed bond. By contrast, Applicant reacts the silicate/silicate condensate with a silyl group-functionalized polymer. The polymer reacts through its silyl moieties with the formation of siloxane (Si-O-Si) bonds between the polymer and the silicate.

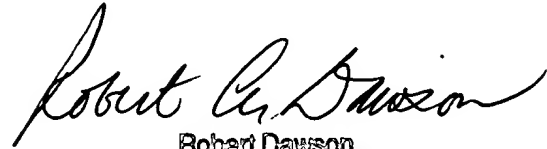
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

March 27, 2003

A handwritten signature in black ink, reading "Robert A. Dawson". The signature is fluid and cursive, with the first name "Robert" and last name "Dawson" clearly legible.

Robert Dawson
Supervisory Patent Examiner
Technology Center 1700